

# PATENT COOPERATION TREATY

## PCT


### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 17 OCT 2005

WIPO PCT

Applicant's or agent's file reference URC048BWO	<b>FOR FURTHER ACTION</b> See Form PCT/PEA/416	
International application No. PCT/EP2004/005375	International filing date (day/month/year) 19.05.2004	Priority date (day/month/year) 26.06.2003
International Patent Classification (IPC) or national classification and IPC B01J2/16, B01J8/28		
Applicant UREA CASALE S.A.		
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> sent to the applicant and to the International Bureau) a total of sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>		
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>		
Date of submission of the demand  21.12.2004	Date of completion of this report  12.10.2005	
Name and mailing address of the International preliminary examining authority:   European Patent Office - Gitschiner Str. 103 D-10958 Berlin Tel. +49 30 25901 - 0 Fax: +49 30 25901 - 840	Authorized Officer  Cubas Alcaraz, J  Telephone No. +49 30 25901-324	



**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

International application No.  
PCT/EP2004/005375

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**Box No. I Basis of the report**

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1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements\*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

**Description, Pages**

1-12 as originally filed

**Claims, Numbers**

1-7 as originally filed

**Drawings, Sheets**

1/3-3/3 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of these sheets may be marked "superseded."

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**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	1-7
	No: Claims	
Inventive step (IS)	Yes: Claims	1-7
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-7
	No: Claims	

2. Citations and explanations (Rule 70.7):

**see separate sheet**

**Re Item V**

1. Reference is made to the following documents:

D1: US-A-2635684

D2: EP-A-1312410

D3: US-A-3036338

2. Document D1 describes (cf. col. 2, line 38-col. 3, line 17; figure) a process for preparing granules using two fluid beds for cooling the hot granules obtained by prilling a molten substance. The same air stream is used for fluidizing both beds. The granules are collected from the second bed using an overflow pipe. This document does not describe a fluid bed for preparing the granules and the extraction of the granules from the last fluid bed using a well fed upstream from the finished granules falling in the last fluid bed.

Document D2 describes (cf. col. 9, line 27-col. 12, line 10; figure 1) a process for preparing granules using a fluid bed, a fluid bed below the granulation bed for drying the finished granules and a further fluid bed for discharging the granules. The same fluidizing gas stream is used in all three beds. This document does not describe the extraction of the granules from the last fluid bed using a well having the same base as the collection fluid bed and fed upstream from finished granules falling in the collection fluid bed.

Document D3 describes (cf. col. 5, line 65-col. 8, line 26; figure 1) a process for preparing granules comprising a fluid bed for preparing the granules (reference 28 in the figure) and a second fluid bed (reference 31 in the figure) for discharging the finished granules. The same fluidizing gas is used in both beds. This document does not describe the extraction of the finished granules from the second fluid bed using a well having the same base as the second fluid bed, which is fed upstream from the finished granules.

Accordingly, the subject-matter of claim 1 is new (Article 33(2) PCT).

3. The problem to be solved by the present invention is to provide a fluid bed granulation process wherein the finished granules are extracted without altering size and shape of the granules.

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(SEPARATE SHEET)**

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Both D2 and D3 do not solve such a problem, since the extraction of the granules requires a mechanical means which could damage the finished granules. Document D1 solves this problem using an overflow pipe. Thus this document can be considered as the closest prior art, even considering that D1 does not describe a fluid bed for preparing the granules. However, The solution disclosed in claim 1 of the present application will avoid the problems of extracting granules not yet dried, because only the granules at the lower part of the collection fluid bed are extracted. Such an effect was not described or suggested by the prior art.

Accordingly, the subject-matter of claim 1 involves an inventive step (Article 33(3) PCT).

4. Similar reasoning applies, *mutatis mutandi*, to the subject-matter of the apparatus independent claim 3, which is considered new and inventive (Article 33 (2)(3) PCT).

5. Claims 2 and 4-7 are dependent on claims 1 and 3 and as such also meet the requirements of the PCT with respect to novelty and inventive step.